

CLAIMS

What is Claimed:

- 5 1. A steering wheel for a motor vehicle comprising:
 a core member having a substantially circular rim;
 at least one dampening element secured about or within said
 rim in vibrational communication therewith, said
 dampening element comprising a periphery;
10 at least one spring member extending about said periphery
 thereby supporting said dampening element; and
 a sleeve positioned about said dampening element, thereby
 covering the dampening element within said steering
 wheel.
2. The steering wheel of claim 1 further comprising a plurality of
 spring members symmetrically oriented about said dampening element.
3. The steering wheel of claim 2 wherein said spring member is
 an O-ring.
4. The steering wheel of claim 2 wherein said plurality of spring
 members is a plurality of O-rings.
5. The steering wheel of claim 1 wherein said dampening element
 has a density greater than the density of said core member.
6. The steering wheel of claim 1 wherein said spring member is
 formed from a resilient material or polymer.
7. The steering wheel of claim 1 wherein the substantially circular
 rim comprises a channel substantially complementary with said
 dampening element.

8. A method of manufacturing a steering wheel comprising the steps of:
 - 5 providing a steering wheel core member having a circular rim;
providing at least one dampening element having a periphery;
positioning at least one spring member about the periphery of
the dampening element;
positioning the at least one dampening element in a sleeve, the
10 spring member resiliently supporting the dampening
element therein; and
securing the sleeve about or within the rim of the steering
wheel core member, thereby providing resilient
suspension of the dampening element relative to the
15 steering wheel core member.
9. The method of claim 8 further comprising the steps of:
 - 5 positioning the core member and sleeve in a molding apparatus;
and
delivering a flowable curable material into the molding
apparatus, wherein the cured material adheres to the
sleeve and core member, and is insulated from the
dampening element and at least one spring member by
the sleeve.
10. The method of claim 8 wherein the at least one dampening element comprises a plurality of dampening elements secured in at least one sleeve about the rim of the core member.
11. The method of claim 8 wherein the at least one spring member comprises a plurality of spring members.
12. The method of claim 10 wherein the at least one spring member comprises a plurality of spring members.
13. The method of claim 12 wherein the at least one spring member comprises a plurality of O-rings.

14. The method of claim 8 wherein the steering wheel rim comprises a channel for receipt of the sleeve.

15. A steering wheel formed according to the method of claim 8.

16. A method of providing for optimal vibration in a vehicle steering wheel assembly comprising the steps of:

forming a steering wheel core member having a substantially circular rim portion, the core member being connectable to a vehicle steering system;

providing at least one dampening element having a periphery;

positioning at least one spring element about the periphery of the at least one dampening element to form at least one spring assembly;

positioning the at least one spring assembly in a sleeve, wherein the at least one dampening element is resiliently supported in the sleeve by the at least one spring element;

rotationally fixing the sleeve about the rim portion;

wherein resilient support by the at least one spring element of the at least one dampening element facilitates resilient relative displacement between the sleeve and dampening element during vibration of the steering wheel assembly, thereby attenuating vibrations imparted thereto from the vehicle steering system.

17. The method of claim 16 wherein the at least one dampening element is formed from a material having a density greater than a density of the core member, thereby imparting an increased inertial resistance to vibration of the steering wheel assembly.

18. The method of claim 16 further comprising the steps of: providing a plurality of sleeves, each having a dampening

element with a different mass resiliently supported therein;

5 measuring vibration of the steering wheel assembly with each of the selected sleeves secured to the steering wheel core; and

10 selecting a sleeve from the plurality of sleeves to impart optimal vibration resistance to the steering wheel assembly based on vibrational characteristics imparted to the steering wheel assembly when secured thereto.

19. The method of claim 16 further comprising the steps of:

positioning a first number of resilient spring elements about a periphery of a dampening element;

5 placing the dampening element with the first number of resilient spring elements in a sleeve, and securing the sleeve to a steering wheel core;

measuring vibration of the steering wheel core with the sleeve mounted thereon;

10 positioning a second number of resilient spring elements about a periphery of a dampening element;

placing the dampening element with the second number of resilient spring elements in a sleeve, and securing the sleeve to a steering wheel core;

15 measuring vibration of the steering wheel core with the sleeve mounted thereon; and

selecting a number of spring elements for positioning on the dampening element to impart optimal vibration resistance to the steering wheel assembly based on vibrational characteristics imparted to the steering wheel assembly when secured thereto.

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20. The method of claim 16 further comprising the steps of:

positioning a first at least one spring element having a first width about a periphery of a first dampening element;

5 placing the first dampening element with the first spring
element having the first width in a sleeve, and securing
the sleeve to a steering wheel core;
measuring vibration of the steering wheel core with the sleeve
mounted thereon;
10 positioning a second at least one spring element having a
second width different from the first width about a
periphery of a second at least one dampening element,
said first at least one dampening element equivalent to
said second at least one dampening element;
15 placing the second at least one dampening element with the
second at least one spring element having a second
width in a sleeve, and securing the sleeve to a steering
wheel core;
measuring vibration of the steering wheel core with the sleeve
mounted thereon; and
20 selecting a width of spring elements for positioning on the
dampening element to impart optimal vibration
resistance to the steering wheel assembly based on
vibrational characteristics imparted to the steering
wheel assembly when secured thereto.